



Vital Access thru Captioning



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February 26, 1997

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Mr. William F. Caton
Acting Secretary
Office of the Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

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Dear Mr. Caton:

Enclosed please find one original and eleven copies (one for each Commissioner) of our comments in the matter of the Notice of Proposed Rulemaking regarding Closed Captioning and Video Description of Video Programming, MM Docket No. 95-176. In addition, there is a computer disk containing our comments in two different formats: standard ASCII (DOS text), and WordPerfect 5.1.

Thank you for your assistance.

Sincerely,

Jeffrey M. Hutchins
Vice President & General Manager

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of)
)
Closed Captioning and Video)
Description of Video Programming)
)
Implementation of Section 305 of)
the Telecommunications Act of 1996)

MM Docket No. 95-176

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COMMENTS OF VITAC
A DIVISION OF AMERICAN DATA CAPTIONING, INC.

1. INTRODUCTION

VITAC is pleased to respond to the FCC's Notice of Proposed Rulemaking ("the Notice") adopted on January 9, 1997.

In 1987 and 1988, we testified on several occasions before the now-defunct Commission on Education of the Deaf (COED), established by the U.S. Congress to make recommendations for improving the education of deaf children and adults in America. We testified that vitally needed captioning services would benefit most from a legislative mandate requiring caption decoders to be built into all television receivers over a certain size. The COED also requested testimony on the possibility of congressional action to require the captioning of most, if not all, video programming. At that time, we testified that a decoder mandate should be first implemented so that a) a broad base of viewers able and anxious to view captions would exist to justify the significant expense of program captioning, and b) motivated by such a broad base, program producers and distributors might voluntarily provide captions, obviating the

need for legislation and enforcement. The COED ultimately passed recommendations in favor of mandating both built-in decoders *and* program captioning. Subsequently, in 1990, the Congress passed the Television Decoder Circuitry Act, requiring caption decoders in most current and future television receivers. The video industry responded generally with a significant increase in the amount of programs distributed with closed captions. However, some segments of the industry responded little or not at all to the vastly increased audience for captioning. This lop-sided response led the Congress to conclude that the COED had been correct in its assessment that a further mandate was needed.

In truth, VITAC is not convinced that the full impact of the Television Decoder Circuitry Act has yet been felt, insofar as its motivation of program producers and distributors to caption voluntarily. Given more time, it is likely that more voluntary captioning would be provided. Nevertheless, the statistics and the anecdotal evidence suggest strongly that some significant number of widely distributed programs would never be freely and voluntarily made accessible to the vast and growing audience who rely upon or use captions. The Congress has seen fit to require captioning of most programming, and the FCC must now regulate that requirement.

In these comments, VITAC cannot and will not respond to most issues of exemptions. Those who seek exemptions and those who might object to them are far better able to state their own case than we are to state it on their behalf. But for whatever programming *is* captioned, whether voluntarily or by mandate, VITAC can

attest directly and confidently to the importance of a certain basic level of "quality" in the content and delivery of those captions. We will not profit more or less as a result of those standards which are established. Our only concern is for the quality of the service which consumers will receive, and our confidence that such quality is directly tied to particular quantifiable and enforceable aspects of the service.

2. CREDENTIALS

VITAC is the third-largest provider of captioning services in the United States, employing over 100 full-time people, with headquarters in Pittsburgh, PA, and captioning facilities in Burbank, CA, and Washington, DC. The company's sole business is the provision of captioning services. Formerly doing business as CaptionAmerica, the company has been a frequent commenter to the FCC in captioning-related matters, and its comments have been frequently cited in previous FCC rulemakings. VITAC is a member of the Television Data Systems Subcommittee (TDSS) within the Electronic Industries Association / Consumer Electronics Manufacturers Association (EIA/CEMA). The TDSS is the largest organized body dealing with issues related to the creation, insertion, transmission, decoding, and display of closed captioning.

Our remarks have been prepared primarily by Jeff Hutchins, Executive Vice President, Planning & Development, at VITAC. He joined this company as an owner in December, 1986. Of particular relevance to these proceedings, Mr. Hutchins is the

author of most of the ANSI/EIA-608 standards document called "Recommended Practice for Line 21 Data Services." He also authored the bulk of the FCC's own rules implementing the Television Decoder Circuitry Act of 1990, i.e. FCC 91-119. These two documents clearly set the standard of what it means to provide high-quality captions in terms of the *electronics* of the service. Mr. Hutchins has also been a video captioner and directly supervised captioners since early 1973. He has come to learn through this work, and through a constant dialogue with the Deaf community, what it means to provide high-quality captions in terms of the *content* of the service.

3. DISCUSSION

(A) Transition Rules for New Programming

For those of us who create captions and monitor their transmission, a clear understanding of the phase-in rules will be important. It's not clear from ¶¶41-¶45 of the Notice how the Commission proposes to measure the percentage of captioned programming required. In ¶43, it is suggested that the percentage be measured across an entire MVPD, such as a cable system. VITAC believes that would be difficult to measure, like shooting at a moving target. For example, Cable Operator A might be in compliance, while Operator B, with only one or two different channels, is not in compliance. Does that mean the mandate to caption falls on those two channels unique to Operator B, while the other uncaptioned (but also non-exempt) channels they share get a free ride for an extra two to six years? What happens if the unique

channels when comparing Operators B and C are different than those for A and B? This discrepancy could lead to Program Provider X, who is already captioning more than their required share, being asked (or forced) to caption even more to make up for Provider Y who is doing nothing. The most equitable solution is to apply the percentage requirements to the non-exempt programming of individual program services or channels. This solution has the added advantage that it will best allow captioning service providers to grow our capacity to meet the needs of the industry, due to the possibility to predict accurately what kinds of captioning services will be required.

As to the time period used for measurement, as discussed in ¶45, the burden of data collection on compliance becomes too great if the time period is greater than one week. It seems most reasonable to us that percentage requirements should be based on any seven consecutive day period minus the number of hours of exempt programming included in that span.

In ¶48, the Commission requests comment on how the rules might adapt to technological changes. Captions can be generated in only one of two places: before or after transmission. Pre-transmission insertion of captioning describes the world we have today. Post-transmission generation can only be accomplished in one way -- through realtime speech-recognition software. There are two problems with post-transmission generation. First, no adequate system -- capable of realtime translation and display, high accuracy, with speaker independence -- exists today or is likely to exist in the next 20 years, certainly not in a size and at a price to be built into television

receivers. Secondly, the very definition of "captioning" eliminates an automated speech-recognition system from consideration. For captioning to do its job of providing "a visual depiction of information simultaneously being presented in the aural channel" (Notice at ¶7), the captions must "also identify speakers, sound effects, music and laughter" (Notice at ¶1). No speech-recognition system is capable of providing such critical additional information, and, therefore, no speech-recognition system will be capable of generating "captions" as we think of them today. Any redefinition of what constitutes captioning is beyond the scope of this rulemaking.

(B) Exemptions of Classes of Video Programming -- Foreign Language

In ¶72, the Commission requests comment on the proposed exemption of foreign-language programming, noting anticipated difficulties in technology and smaller audiences. VITAC agrees that an exemption is warranted for programming in languages that do not use a Latin-based alphabet. It would also be appropriate to grant a longer phase-in period to realtime captioning of those foreign languages which do use a Latin-based alphabet.

Where there is a shortage of qualified stenocaptioners for English-language realtime captioning, there is an absolute vacuum of stenocaptioners capable of live captioning in other languages. In addition, there is no solid, conflict-free, Spanish-to-Spanish stenotype theory, although a new theory is now being tested. It may be physically impossible to train students to write conflict-free Spanish at 200 words per

minute, the speed of an average American newscast. A consultant with Stenograph - the world's largest maker of hardware and software products for court reporters -- has told VITAC that a project to train qualified Spanish-to-Spanish stenocaptioners is still a couple of years away, though a similar project for Portuguese has progressed well. This consultant says that current efforts at Spanish-language realtime have yielded extremely high (greater than 10%) error rates. Also, there are hardly any schools teaching Spanish stenotypy. We were informed that it would be impossible for a stenocaptioner to translate *accurately* an English-language program into Spanish and simultaneously create Spanish stenotype captions. An interpreter would have to be used to translate the English into Spanish, and the stenocaptioner would then write the Spanish interpretation.

On another front, VITAC has consulted with the Center for Machine Translation (CMT) at Carnegie-Mellon University. CMT has developed a language translator that will translate English into Spanish, Japanese, German, and French simultaneously, but at speeds not close to real time. The researchers at CMT say real time may never be achieved with an acceptable accuracy rate.

If there is a mandate to caption in a foreign language, such as Spanish, then that vacuum of qualified personnel will eventually be filled, but not quickly. For every 100 people who enter school to learn machine shorthand (the basic skill needed for stenocaptioning), approximately five will achieve the minimum skills necessary for court reporting, and no more than two of those will have the additional skills required to *begin*

training for realtime writing. Of 100 students who enter court reporting school in fall, 1997, no more than two will become captioners, and even those two will not be ready to apply their skills until fall of the year 2000 *at the earliest*. If we wished to caption Spanish-language newscasts in realtime, we (the captioning industry) would need at least four years to recruit and train adequate numbers of Spanish-speaking stenocaptioners. (We do note that one company, Real-Time Captions, Inc., says they already have a small number of Spanish-language stenocaptioners. We know of no stenocaptioners capable of realtime writing in any other language.)

Based on the above assessment, VITAC recommends that the phase-in period for realtime Spanish (or other Latin-alphabet-based) captioning be 25% coverage within six years, 50% within eight years, and 100% within ten years.

The status for off-line Spanish (or other Latin-alphabet-based captioning) is much less dire. It would be possible to begin captioning a significant amount of such foreign-language programming in a matter of months.

We would urge the Commission to recommend (not require) that any foreign-language captioning, even when the audio of such programming is in that foreign language, should be transmitted in Field 2 of Line 21, using the so-called "CC-3" caption data channel. (See FCC 93-235, Report and Order adopted May 5, 1993.) We note that dual-language captioning, e.g. English/Spanish, will, by recommended practice, always place the English captions in Field 1 ("CC-1") and the second language in Field 2. If users of foreign-language captions are to be well served, they

should have the predictability of always finding their captions in the same data channel. There will be no harm to those viewers or to the program providers serving those viewers, if foreign-language captions are always in Field 2.

(C) Standards for Accuracy and Quality

To VITAC, as a captioning service provider, no aspect of the Commission's rulemaking is more important than its statements regarding the accuracy of closed captioning. Providing highly accurate captioning is a difficult, labor intensive, and costly process, but one that VITAC feels is critical if captioning is to have any value at all to the consumer.

For the viewer who cannot hear, the extent to which they must trust the accuracy of the captions is overwhelming. If the wrong word is given, or if words are misspelled or missing, the consumer has little recourse to clear up any miscomprehension. Captions, unlike words in a book or newspaper, are impermanent. Typographical errors in print media allow the reader to pause and piece together the correct information. But the caption reader who becomes confused by a mistake does not have the luxury of pausing and looking back over previous words to deduce what was actually meant. They have but one chance to receive the correct word and comprehend it.

Part of the art of captioning is the presentation -- the manner, placement, and timing -- of the captions. ("Manner" refers to the style -- pop-on or roll-up -- and justification -- centered, left-justified, etc. -- and shape and row division of the captions.)

Presentation can significantly impact the ability of the viewer to read the caption, view the picture, and make sense of the two. Because even expert captioners cannot agree completely on what constitutes the best presentation, we concur with the Commission's statement at ¶111 that presentation issues are not an appropriate matter for the Commission to regulate. However, the *accuracy of the basic word content* is a more easily quantifiable issue.

Accuracy is a function not only of correct spelling of the correct word (some of the most inaccurate captions are perfectly spelled), but also of *completeness*. In a notorious case in Canada, a producer claimed that his show was captioned, even though only a tiny portion of the program had been done. His rationale was that he only said his program "had captions," not that it was captioned in its entirety. Clearly, his definition fell short of what any reasonable person would use.

One of the most common areas of incomplete captioning is local news programming. As stated in the Notice at ¶21 and ¶69, most, but not all, local TV stations providing captions with their news programs are doing so by means of a captioning interface added to their talent prompting system, the so-called "ENR" captioning method. The best one can say about many ENR efforts is that they are better than nothing. Hopefully, the Commission will set the bar higher than that as a standard for acceptability.

The question is, at what level of inaccuracy does closed captioning no longer represent accessibility? There must be a point between 100% accuracy and 0%

accuracy at which captioning becomes worthless or, what may be worse, conveys misinformation and leads the viewer to the wrong conclusion. Consider the ramifications of omitting the word "not" in a caption which advises that viewers "should not leave their homes during the storm."

VITAC believes that there is a certain basic definition that must be met before a program can be called "captioned." VITAC believes that for a program to meet any mandate to be captioned, the program must be captioned completely from start to finish, and that those captions must be as close to verbatim as technically possible, with virtually all words spelled correctly. VITAC suggests no more than 0.2% of the words in a prerecorded show and 3% in a live show may be wrong, misspelled, or absent. Exceptions to this rule should exist only when captions would significantly conflict with other information presented visually, such as graphics, credits, or pictorial information which is, at least in part, self explanatory, and in cases where multiple simultaneous speakers render complete captioning impossible. Beyond this clear definition of what it means for a program to be "captioned," all other quality-related issues should be left to private-industry initiatives.

It is interesting to note, from the background material presented in the Notice, that it is the small, lower-cost captioning agencies which suggest no standards of quality are necessary, and the larger, higher-cost agencies which believe standards are needed. Clearly, both cannot be correct. The Commission should consider the motives

of each type of agency. The truth lies somewhere in the middle; some standards are called for, but not every aspect of caption content should be regulated.

Our concern regarding the completeness and basic accuracy of the captions is based on a knowledge of the practical considerations faced by program providers. The cost of captioning is a serious issue even to the most ardent supporter of captioning. The easiest way to keep costs down is to sacrifice quality. We do not mean to imply that low-cost services automatically are less complete or accurate. Rather, these two defining measurements are directly related to the quality controls put in place by the captioning agency. Specifically, quality improves as the training of the captioner increases and as the amount of time spent reviewing the captions increases, particularly for off-line (prerecorded) programs. Training of stenocaptioners, the people who write realtime captions, is a very significant expense, but it is one that directly results in more accurate, complete realtime captions. We find a similar cost-benefit expense with training of our off-line captioners. Also, prerecorded program captions always improve with each quality review. (VITAC requires that the captions for every show be reviewed by at least one additional person *after* the initial captioner has finished the show. Each review takes at least one-and-one-half times the length of the program, so that we add generally one or two hours of work to each half-hour program we caption, just to ensure accuracy and completeness. Whenever this review is eliminated for any reason -- due, for example, to time constraints -- we invariably see many mistakes which would otherwise have been corrected.)

We do not recommend that the Commission attempt to set the amount of training or number of reviews required, but by adopting a standard of 97% accuracy in a live show and 99.8% in a prerecorded show, we believe that captioning agencies will adopt appropriate training procedures to achieve these levels.

If there is no quality requirement, many programmers who today do not voluntarily provide closed captions will decide that they wish to do so at the lowest possible cost, and they will readily accept poor quality in order to meet their statutory obligations. Captioning agencies like VITAC, which invest in appropriate training and quality controls, will be forced to cut prices in order to remain in business. As a for-profit company, VITAC is already lean and efficient. The only way to cut prices is to cut expenses. The only way VITAC will be able to cut expenses is to significantly reduce training and time-consuming quality reviews. Both of these actions will, without a doubt, produce a sharp reduction in the completeness and accuracy of the captions we produce *for all customers*, not just those who seek lower prices.

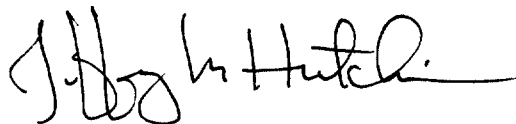
The way we keep prices down now is through the economies of scale; training all stenocaptioners equally means they can all work on any of the shows we do, which gives us maximum flexibility -- and cost reductions -- in scheduling the staff. We cannot train some people at one level for the customers who desire high quality, and others at a lower level for those who demand "quick and cheap" captions. In other words, VITAC believes that **should the Commission fail to adopt at least a minimal standard for completeness and accuracy in all captions, that all captioning will fall to the lowest common denominator**, and that by the time the Commission revisits this issue, companies which are capable of good captioning will be extinct.

4. CONCLUSION

Every day, captions improve the lives of millions of Americans who cannot fully hear and understand television. For those people, it is not a luxury. A carefully considered rulemaking by the Commission has the potential to affect the amount and quality of captioned television for decades to come. The Commission's main work under the *Telecommunications Act's* mandate for captioning appears to be to consider if and how to grant exemptions to program providers. VITAC believes that the most important aspect of whatever exemptions are granted is to prevent the *de facto* "exemption" that accompanies poor quality or missing captions. The Commission must ensure that those non-exempted programs which call themselves "captioned" are, in fact, completely and, to some degree, accurately captioned.

Section 713 of the Telecommunications Act of 1996, coupled with thoughtful regulation by the Commission will ensure that captioning becomes a television feature used and valued by all Americans.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jeffrey M. Hutchins". The signature is fluid and cursive, with the first name "Jeffrey" and last name "Hutchins" clearly distinguishable.

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